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Author(s): Bossert, Carolyn Marie

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FY19 R&D University Subcontracts

Expenditure Code 621UC000

Carolyn M. Bossert
National Security Education Center
May 15, 2020



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LA-UR 20-XXXX

University R&D Subcontracts – SUMMARY

FY19 University Subcontract Summary

- **\$32,194,919** Total LANL funding in FY19
- **16.6%** increase over FY18 (+\$4,586,115)
(continuing the 29% increase in FY18 (+ \$6,220,623))
- **326** Subcontracts in FY19, **12.4%** increase over FY18
- Regional Universities saw a **\$1,772K**, or **10.9%** increase
- **38** States, **111** Individual Campuses, 7 Foreign Countries
- **141** LANL Organizations - *some subs funded by more than one org*

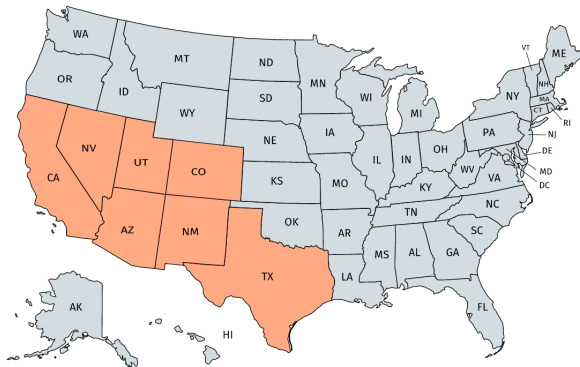
“University Subcontracts” are agreements between LANL and universities and other educational non-profits for unclassified research and development

** Data run on Expenditure Code 621UC000 Costs for FY19*

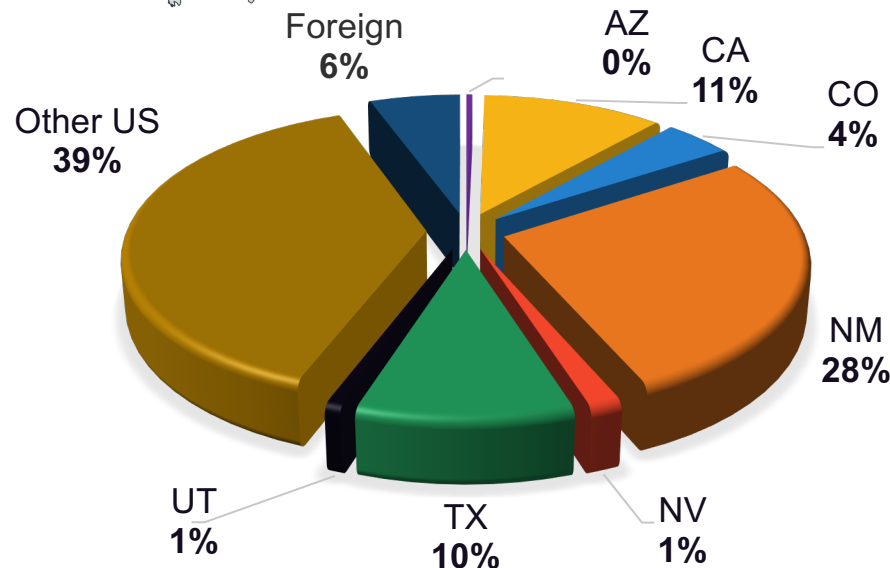
University R&D Subcontracts – Regional Distribution

FY19 Funding Distribution – Regional

Total University Subcontract Funding: \$32,195K



Regional Universities
saw a **\$1,771,877**
increase over
FY18 funding (+10.9%)



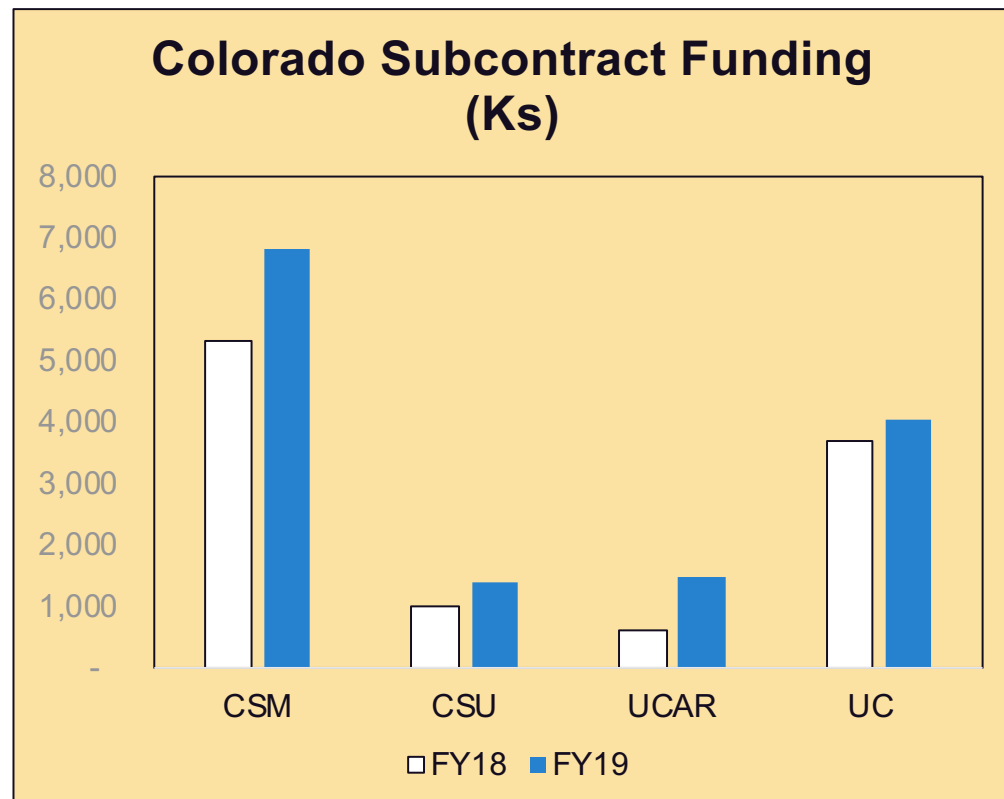
- \$17,997,719 total regional funding
- 10.9% increase in total funding
- 55.8% of total subcontract funding
- **Five** regional states saw increases
- Total **173** subcontracts
- \$104K average/subcontract (+ 4%)

University R&D Subcontracts – Colorado School of Mines

FY19 Funding Distribution – Colorado

Total University Subcontract Funding: \$32,195K

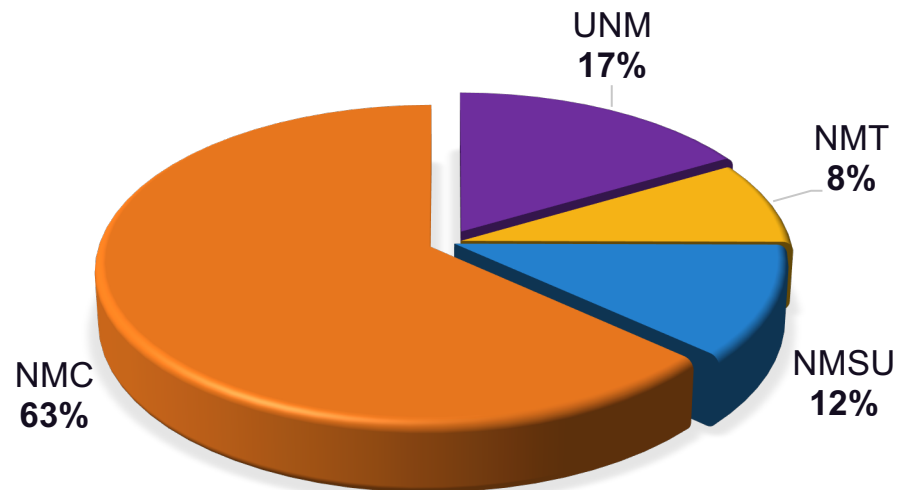
- **\$682,562** -Total Colorado School of Mines FY19 funding; **5** subcontracts
- **28.21%** increase in CSM FY19 funding
- Colorado School of Mines - **11th** Funded University
- **29.13%** increase in total CO FY19 funding
- CO ranked **5th** funded state, and a LANL regional partner



University R&D Subcontracts – New Mexico

FY19 Funding Distribution – New Mexico

Total University Subcontract Funding: \$32,195K



NMT: New Mexico Institute of Mining & Technology
NMSU: New Mexico State University
NMC: New Mexico Consortium
UNM: University of New Mexico

- **Total NM Funding:** \$8,887K
- **7.6%** increase over FY18 Dollars
- **69** subcontracts (FY18=70)
- **\$128.8K** average/subcontract (10% increase over FY18)

48% of NMC funding is associated with the “**Ultrascalse Systems Research Center**” (USRC), a collaboration between NMC and LANL to engage universities and industry nationally in support of high performance computing research

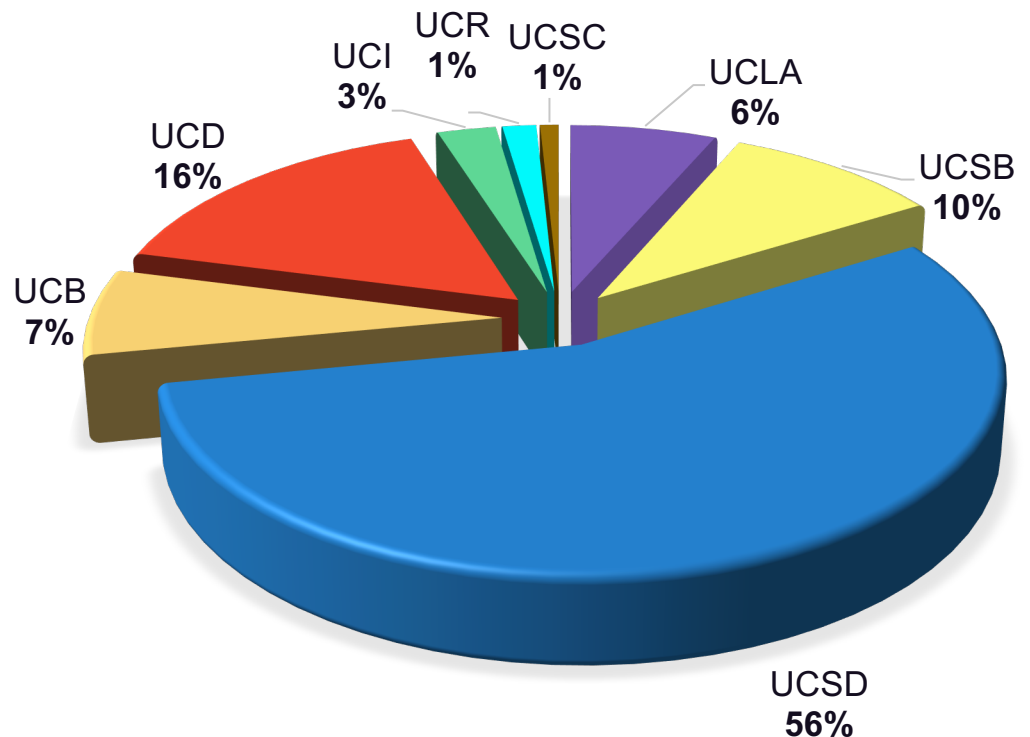
University R&D Subcontracts – University of California

FY19 Funding Distribution by UC Campus

Total University Subcontract Funding: \$32,195K

- **Total UC Funding: \$3,058K**
- **29 subcontracts**
- **\$105.5K average/subcontract**

75% of UCSD funding is associated with the “LANL/UCSD Engineering Institute”, a research and educational partnership between LANL and the UCSD Jacobs School of Engineering, established in 2003



University of California, Berkeley, UC Davis, UC Irvine, UC Los Angeles, UC Riverside, UC San Diego, UC Santa Barbara, UC Santa Cruz

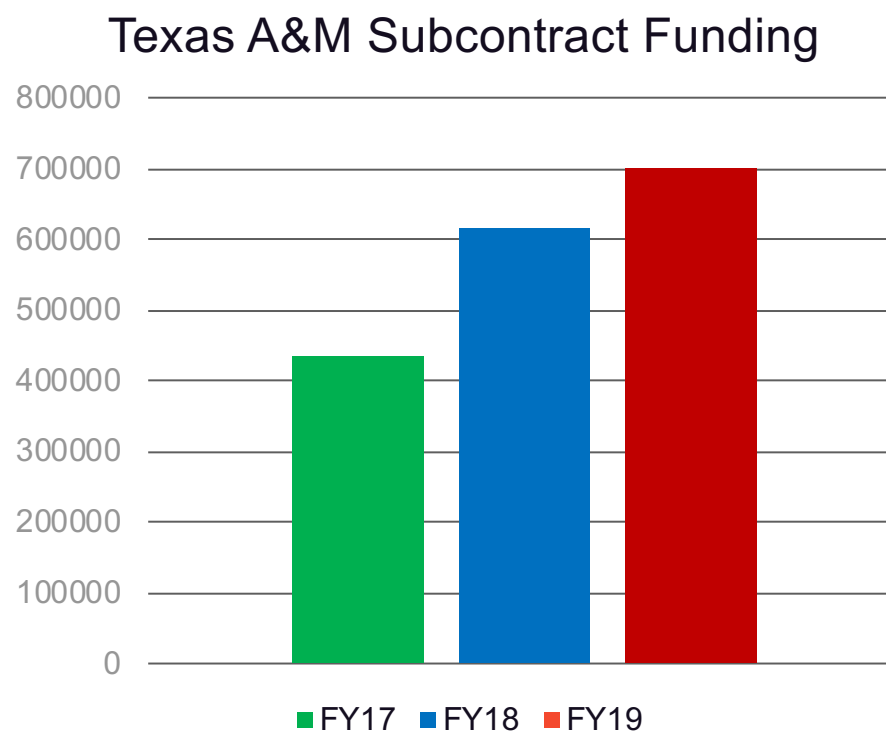
University R&D Subcontracts – Texas A&M

FY19 Funding Distribution – Texas A&M

Total University Subcontract Funding: \$32,195K

- **\$700,403** -Total Texas A&M FY19 funding
- **13.8%** increase in FY19 funding
- **42%** increase in number of subcontracts (17 total)
- Texas ranked one of top 10 funded states, and is a LANL regional partner

Texas A&M presents an opportunity for collaboration growth and expansion

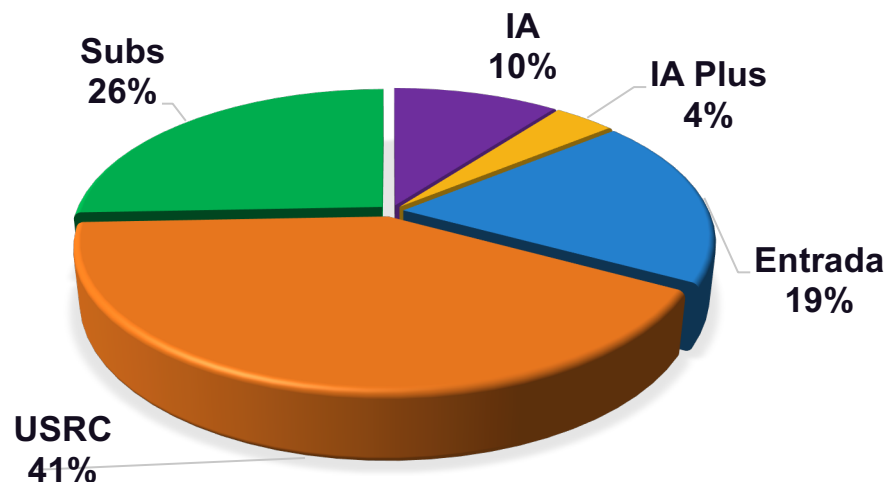


University R&D Subcontracts – New Mexico Consortium

New Mexico Consortium

FY19 Total NMC Funding - \$6,554K (11% increase)

- \$2,717K: Ultrascale Research Center (USRC - 4 subcontracts)
- \$1,679K: Twelve other subcontracts (**\$1M increase over FY18**)
- \$675K: Institutional Agreement (IA - non-subcontract)
- \$249K: IA Programmatic Funding (non-subcontract)
- \$1,233K: Entrada Biolab Access Agreement (subcontract)



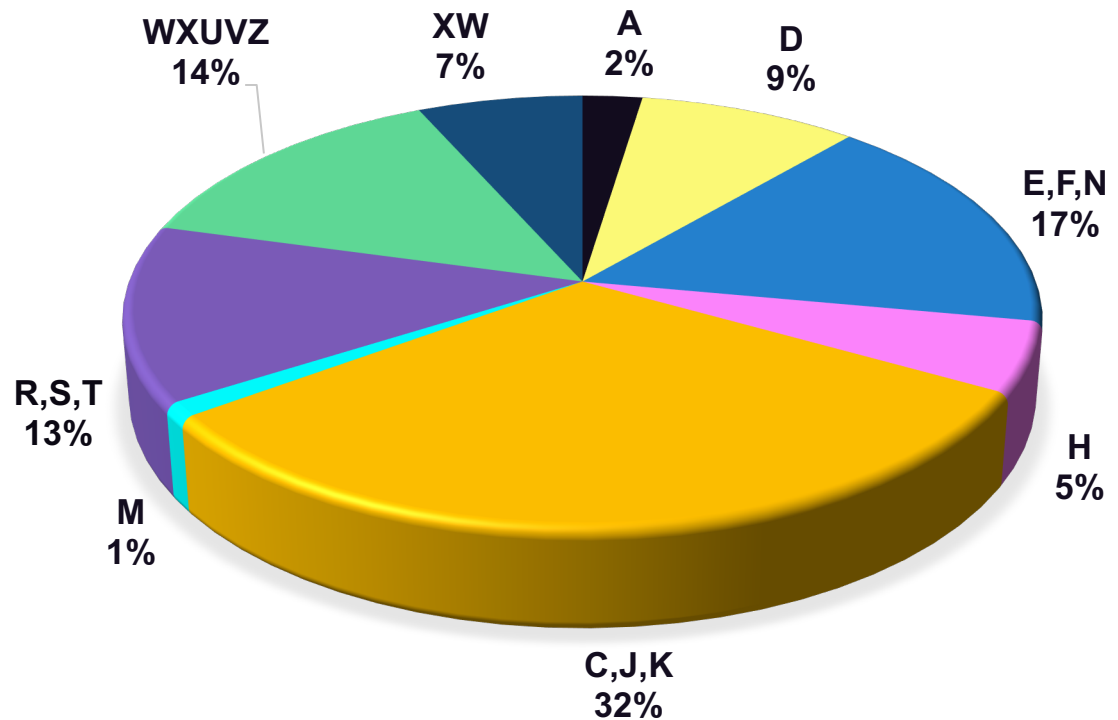
New Mexico Consortium is a non-profit formed by the three New Mexico universities in order to facilitate research in the state of New Mexico, specifically to increase research collaborations between universities, industry, and Los Alamos National Laboratory.

University R&D Subcontracts – by Funding Source

FY19 Funding Distribution by Source

Total Funding - \$32,195K

University collaborations fueled by a wide variety of funding sources



Funding Code Descriptions

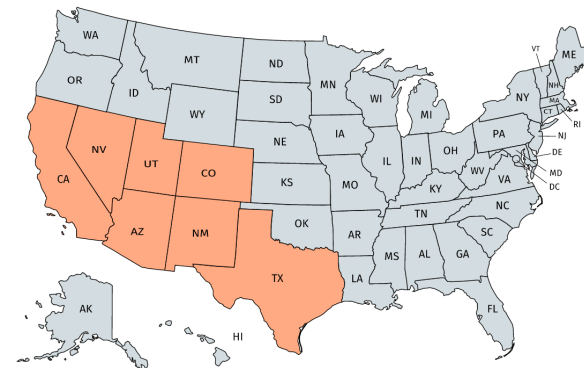
- **A:** AARA, Fossil Energy, Energy Efficiency, ES&H, Non-Prolif. & Counter Intelligence
- **D:** Nuclear Energy & Energy Efficiency
- **E,F,N:** Office of Science
- **H:** Non-proliferation & Intelligence
- **C,J,K:** Weapons, Threat Reduction
- **M:** Environmental Management
- **R:** Strategic Partnership Project (SPP)
- **S:** Integrated Contractors
- **T:** Tec Transfer-Funds in Agreements
- **W, UT, V, Z:** G&A, Site Support, Misc.
- **X:** GRT, Program Office, Site-Support
- **XW:** LDRD

University Subcontracts - Top 10 Funded Universities

Top 15 Funded Universities in FY19

- New Mexico Consortium*
- University of Michigan
- University of Texas – Austin*
- University of California – San Diego*
- University of New Mexico*
- *University of Azores*
- University of Washington
- New Mexico State University*
- New Mexico Institute of Mining and Technology*
- Texas A&M University*
- Colorado School of Mines*
- Georgia Institute of Technology
- Stanford University*
- New York State University
- University of California – Davis*

* 10 of the top
15 Funded
Universities are
within the Region



Top 10 Funded States in FY19

- 4 of the top 5 funded states are regional partners

New Mexico Educational Institutions: FY10-FY19

DOLLARS PER UNIVERSITY

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
UNM	1,430,320	1,295,794	1,554,624	1,547,745	1,931,356	1,678,389	1,441,172	1,654,061	1,599,288	1,478,150
NMT	200,082	165,993	278,667	234,170	140,863	118,580	275,021	720,730	478,336	752,173
NMSU	752,430	753,508	910,319	913,842	952,199	950,525	1,178,853	895,671	1,207,474	1,027,785
NMC	306,671	974,124	1,088,017	721,817	843,710	774,705	1,313,074	1,638,470	4,970,646	5,629,061
SFCC	-	-	-	-	33,267	-	-	-	-	-
HIGHLANDS	-	34,200	-	1,318	4,000	-	-	39,968	-	-
NM TOTAL Funding	2,689,503	3,223,618	3,831,627	3,418,892	3,905,394	3,522,199	4,208,120	4,948,900	8,255,744	8,887,169
TOTAL Funding	19,141,696	22,302,950	21,502,951	21,020,470	21,993,557	22,001,916	20,983,971	21,359,623	27,585,755	32,194,919

NUMBER OF SUBCONTRACTS PER UNIVERSITY

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
UNM	21	29	31	40	39	31	25	31	29	28
NMT	21	7	9	6	5	12	8	7	13	12
NMSU	14	15	12	12	12	26	10	14	12	12
NMC	5	7	11	2	5	4	7	14	16	17
SFCC	-	-	-	-	1	-	-	-	-	-
HIGHLANDS	-	1	-	1	1	-	-	1	-	-
NM TOTAL Subs	61	59	63	61	63	73	50	67	70	69
TOTAL SUBS	255	308	301	284	309	263	278	282	290	326

	122	119	122	109	110	112	104	103	107	111
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University of California: FY10-FY19

DOLLARS PER UNIVERSITY

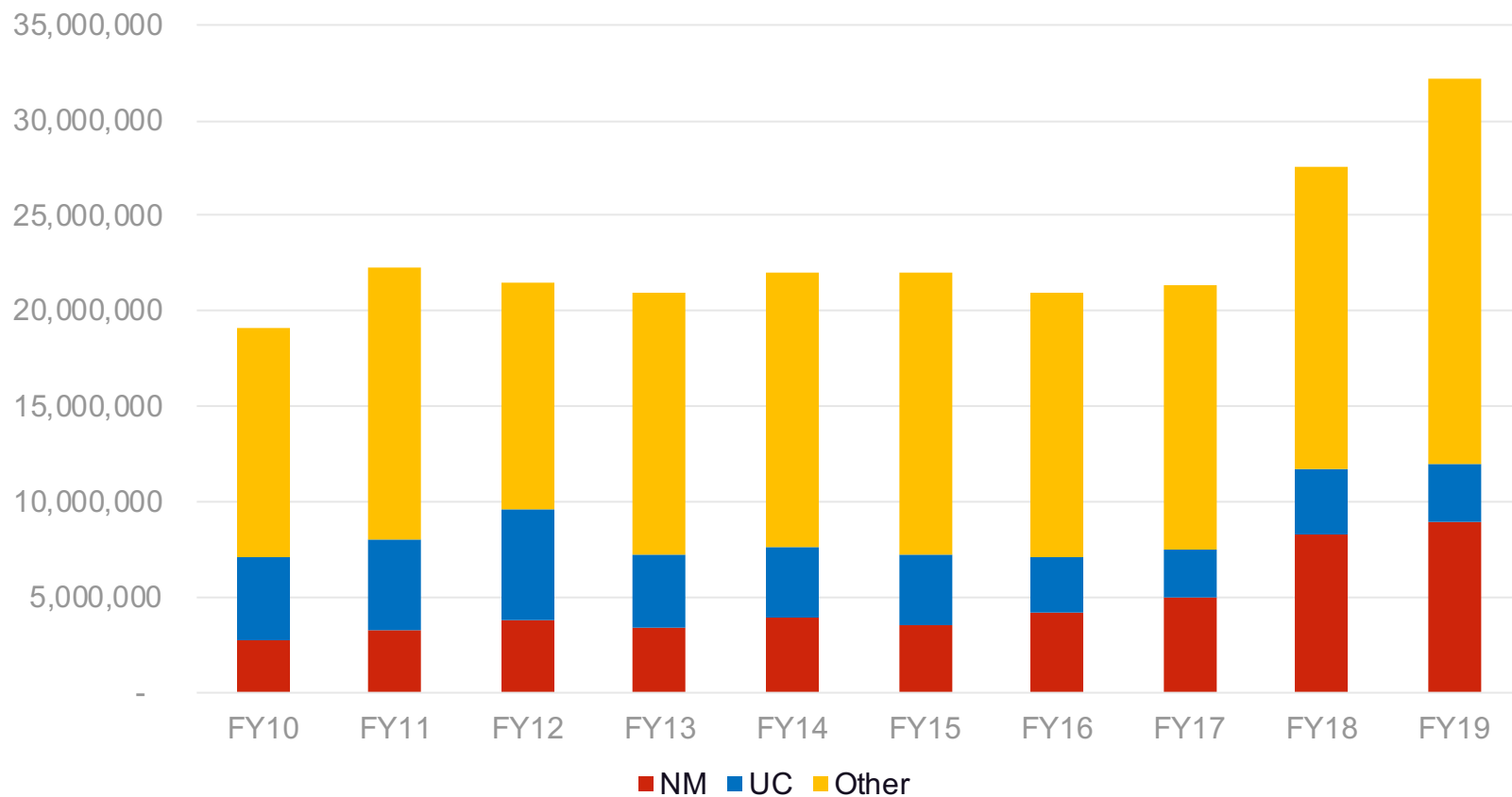
	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
UC (undefined)					25,000	14,623	-	-	158,000	
UC Berkeley	191,164	133,871	184,699	300,609	102,027	494,573	313,505	-	144,235	216,525
UC Davis	544,013	760,993	1,157,002	598,010	956,933	356,903	243,258	255,134	314,479	489,275
UC Irvine	279,052	739,344	488,596	426,145	381,064	283,652	438,996	355,343	255,917	79,870
UC Los Angeles	443,611	253,497	475,392	262,000	470,646	453,939	196,297	230,741	109,671	199,166
UC Merced	-	-	-			-	-	-	-	
UC Riverside	97,279	230,143	232,919	22,689	-	8,745	18,142	18,815	90,507	46,120
UC San Diego	1,572,045	1,833,554	2,215,208	1,635,688	1,359,754	1,416,547	1,291,092	1,426,240	2,255,886	1,705,101
UC San Francisco	-	-	-	72,399	103,491	251,183	70,495	-	-	-
UC Santa Barbara	754,575	591,831	641,173	163,279	44,471	16,885	32,733	119,855	72,669	297,145
UC Santa Cruz	497,011	311,531	437,512	367,331	307,482	365,032	261,690	106,089	8,716	25,280
UC TOTAL Funding	4,378,749	4,854,765	5,832,500	3,848,149	3,750,867	3,662,082	2,866,206	2,512,218	3,410,079	3,058,481
TOTAL Funding	19,141,696	22,302,950	21,502,951	21,020,470	21,993,557	22,001,916	20,983,971	21,359,623	27,585,755	32,194,919

NUMBER OF SUBCONTRACTS PER UNIVERSITY

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19
UC (undefined)	-	-	-	-	1	2		-	-	
UC Berkeley	3	6	7	10	3	5	5	-	7	4
UC Davis	4	6	7	7	8	7	5	3	3	6
UC Irvine	5	2	3	5	6	5	3	3	3	3
UC Los Angeles	2	4	6	5	5	6	2	3	3	3
UC Merced	-	-	-	-	-	-	-	-	-	-
UC Riverside	2	3	3	2	-	1	2	1	2	2
UC San Diego	6	8	10	9	9	11	7	6	4	6
UC San Francisco	-	-	-	1	1	2	1	-	-	-
UC Santa Barbara	3	4	3	2	2	1	2	2	2	4
UC Santa Cruz	2	2	2	3	4	5	3	2	1	1
UC TOTAL SUBS	27	35	41	44	39	45	30	20	25	29
TOTAL SUBS	255	308	301	284	309	263	278	282	290	326
TOTAL Universities	122	119	122	109	110	112	104	103	107	111

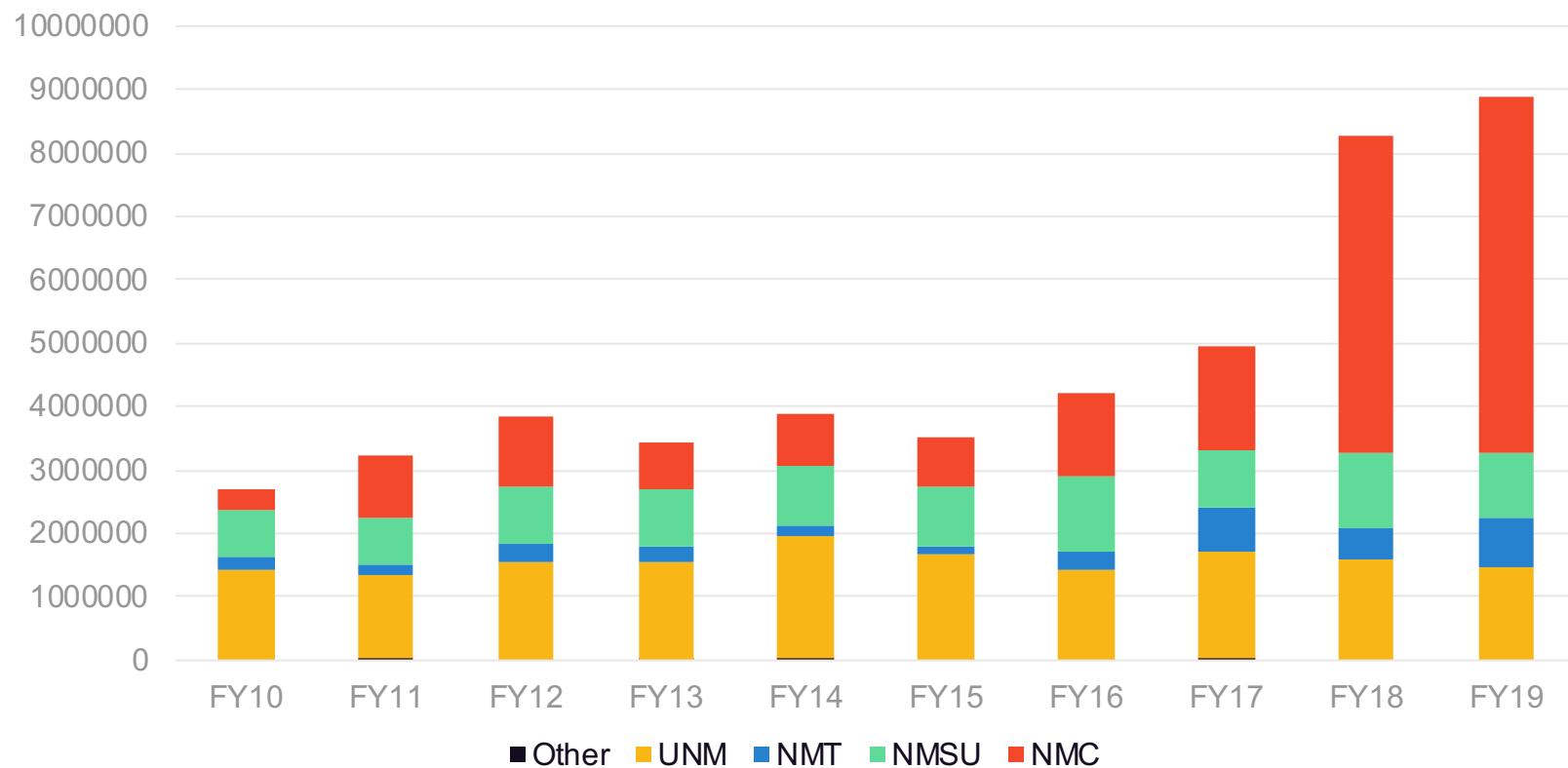
Subcontract Funding: Total Dollars

Total University R&D Subcontracts
FY10-FY19 (Dollars)



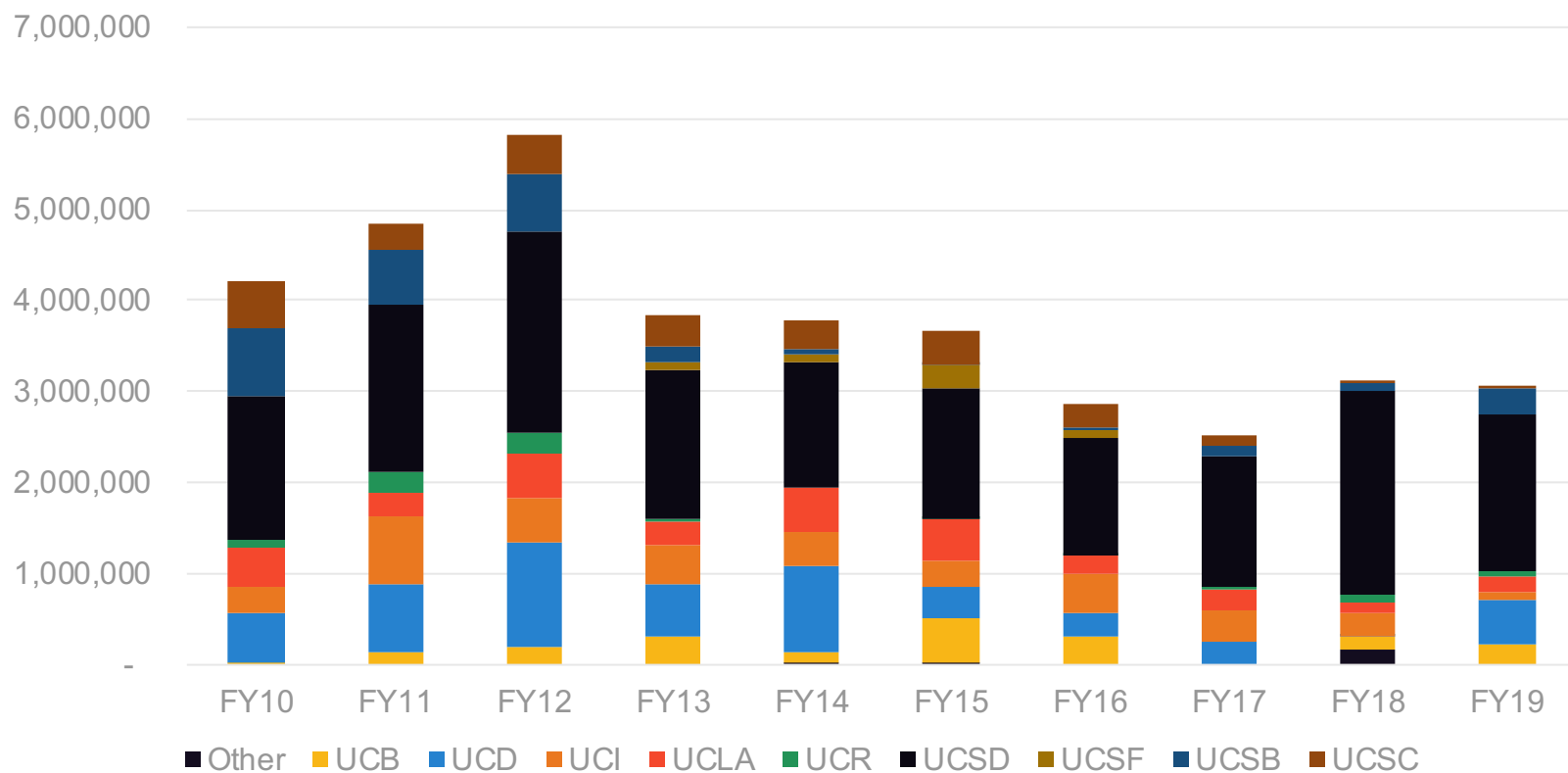
Subcontract Funding: New Mexico Universities

New Mexico University
University R&D Subcontracts
FY10-FY19 (Dollars)



Subcontract Funding: University of California

University of California
University R&D Subcontracts
FY10-FY19 (Dollars)



University Subcontracts - Examples

Some examples of Different Types of University Subcontracts:

- **Educational R&D:** “Genomics Capacity Building for Rapid Disease Detection and Diagnosis: Strengthened by Responsible Science, Bioethics and Mentorship”; “Nanomaterial Synthesis, Characterization, and Film Deposition”
- **Degree Program:** “Engineering Master’s Degree Program”
- **Capstone Project:** “NMT Capstone Project: Chemical Engineering Car Design Project”
- **Educational Collaboration:** “LANL/UCSD Engineering Institute”

Educational R&D

Subcontracts normally include funding for a student(s), travel to/from Los Alamos, and a bit of a professor’s time to mentor; *may include* paper submittal fees, travel to conference, tuition, computer

University Subcontracts - Additional Information

Analysis: Assumptions, Limitations

- Data includes full FY19 cost data and end-of-year accruals on Expenditure Code 621**UC**000
- Assumption is that POs are coded correctly to 621UC000
- Service POs coded to 621**00**000 or elsewhere not included
- Non-university vendors and consultants coded in error manually removed
- Subcontracts with zero or negative balances (credits) manually removed

For additional information, statistics, slides, contact:

Carolyn M. Bossert
National Security Education Center
505-695-3666
cbossert@lanl.gov